

REMARKS

Claims 1-23 are pending and at issue in this application. By this amendment, claims 1, 2, 8, 9, and 15 have been amended, no new claims have been added. Applicants submit that no new matter has been added, nor do these amendments raise new issues requiring further consideration or search because the subject matter is fully disclosed in the application as originally filed and searched.

I. STATUS OF THE AMENDMENT

Claims 1, 3, 5-8, and 12-18 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,452,268 (Bernstein); claims 1-3, 5-10, 12-18, and 21-23 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,870,482 (Loeppert); claims 2, 4, 9, 11, and 19-23 have been rejected under 35 U.S.C. §103 as unpatentable over Bernstein.

In light of the following remarks and foregoing amendments, applicants respectfully submit that the above-identified application is in condition for allowance. Applicants respectfully solicit entrance of these amendments, withdrawal of the claim rejections, and allowance of claims 1-23.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 102

Claims 1, 3, 5-8, 10, 12-18 have been rejected under 35 U.S.C. §102(b) as anticipated by Bernstein. Claims 1-3, 5-10, 12-18, and 21-23 have been rejected under 35 U.S.C. §102(b) as anticipated by Loeppert. Applicants respectfully traverse these rejections.

Amended independent claims 1, 8 and 15, as well as dependent claims 2-7, 9-14 and 16-23, recite a device comprising, in relevant part, a sidewall having a plurality of ridges and grooves arranged to support a thin-film plate, wherein the plurality of ridges and grooves of the sidewall cooperate to form at least one rib. For

example, as illustrated in FIG. 2, the thin-film plate 12 is supported by a sidewall 14 arranged generally perpendicular to the thin-film plate 12 and including a plurality of periodic ridges 20 and grooves 22 forming a ribbed structure. *See generally*, page 4, lines 18-27 for the supporting disclosure.

Neither Bernstein nor Loeppert discloses, or even suggests, a sidewall having a plurality of ridges and grooves arranged to support a thin-film plate, wherein the plurality of ridges and grooves of the sidewall cooperate to form at least one rib. Rather, Bernstein discloses a square raised planar thin-film supported by individual footings at each of the four corners. The footings do not form a sidewall of any kind, much less a sidewall having a plurality of ridges and grooves arranged to support a thin-film plate. Moreover, because the individual footings are only positioned at the corners, and do not include ridges or grooves, the footings do not, and cannot, form at least one rib, as recited by the claims at issue. For all these reasons, Bernstein does not anticipate claims 1, 8 and 15, or any claim dependent thereon.

Loeppert discloses a cantilevered thin-film structure having a diaphragm 12 extended over an opening and anchored at a fixed end 12a to a support structure 11 while the remaining three sides are free and unanchored. *See* Bernstein at col. 3, lines 44-48. Even if we assume for the sake of argument that the support structure is a sidewall, Loeppert does not disclose a plurality of ridges and grooves, much less a plurality of ridges and grooves that cooperate to form a rib. In fact, Loeppert discloses that ridges and grooves may be formed only within the diaphragm, and *not the sidewall*, to increase the overall stiffness of the cantilever diaphragm. For all these reasons, Loeppert does not anticipate claims 1, 8 and 15, or any claim dependent thereon.

III. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 2, 4, 9, 11, and 19-23 have been rejected under 35 U.S.C. §103 as unpatentable over Bernstein. As discussed above in Section II, claims 2, 4, 9, 11, and 19-23 recite, in relevant part, a device comprising a sidewall having a plurality of ridges and grooves arranged to support a thin-film plate, wherein the plurality of ridges and grooves of the sidewall cooperate to form at least one rib. The inclusion of the plurality of ridges and grooves within the structure of the sidewall 14 creates radial sidewall segments that extend in the same direction as the inherent tension T of the thin-film plate 12. These radial sidewall segments counteract the inherent tension T and stiffen the overall structure of the sidewall 14.

Bernstein fails to establish a *prima facie* case of obviousness¹ because it fails to teach or suggest each and every limitation of the claims. In particular, Bernstein does not teach, or even suggest, the use of a sidewall having a plurality of ridges and grooves arranged to support a thin-film plate. Moreover, Bernstein does not recognize the need and/or benefit realized by including a plurality of ridges and grooves in the sidewall structure to stiffen and prevent bending of the thin-film plate. Thus, because Bernstein does not establish a *prima facie* case of obviousness by disclosing the use of a sidewall having a plurality of ridges and grooves arranged to support a thin-film plate, the raised microstructure of claims 2, 4, 9, 11 and 19-23 is not rendered obvious thereby.

¹ To establish a *prima facie* case of obviousness, three basic criteria must be met:

- (a) First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- (b) Second, there must be a reasonable expectation of success.
- (c) Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

IV. CONCLUSION

For these foregoing reasons, applicants submit the application is in condition for allowance. If there are any additional fees or refunds required, the Commissioner is directed to charge or debit Deposit Account No. 13-2855 (30521/071).
Reconsideration and withdrawal of the rejections are therefore respectfully requested.

Respectfully submitted for,

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